Collaborative Robotics Under ISO 10218 and ISO/TS 15066

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What the Standards Require

ISO 10218 specifies safety requirements for industrial robots; ISO/TS 15066 extends to collaborative operation (cobots) with humans in the workspace. The standards specify multiple safety-related operating modes: safety-rated monitored stop, hand guiding, speed and separation monitoring, power and force limiting.

Each mode has declared admissibility conditions and declared protective behaviors. The mode structure is regulatorily explicit; architectural support for mode-decomposition varies vendor-by-vendor.

Graduated Modes as Structural Primitive

Governed actuation's graduated-mode-set maps directly to ISO/TS 15066's collaborative-mode taxonomy. Each mode admits through declared admissibility; mode transitions enter lineage; safety-rated monitored stop becomes a structurally-credentialed event rather than an implementation outcome.

Compliance Audit Under the Architecture

Notified-body and customer audits traverse: which mode was active, what triggered the mode, what protective behavior executed, whether mode transitions complied with declared rules. The audit reads architectural records.

Cobot OEMs (Universal Robots, FANUC, ABB, Yaskawa, KUKA, emerging vendors) that adopt the architectural primitive gain structurally-supported compliance audit.